

Notice of Allowability**Application No.**

09/723,104

Examiner

George R. Koch III

Applicant(s)

BURKE, JOHN

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/5/2004.
2. ☒ The allowed claim(s) is/are 1,3-8 and 14-21.
3. ☒ The drawings filed on 21 April 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Allowable Subject Matter

1. Claims 1, 3-8, and 14-21 are allowed.

2. The following is an examiner's statement of reasons for allowance: With regard to claims 14-16, in a method of connecting a first and a second conductive surface including steps of placing an anisotropic material between first and second substrates to form an assembly, heating the anisotropic material to cure the anisotropic material, and compressing the assembly to form a conductive bond between the first and second conductive surfaces via the anisotropic material, the prior art does not disclose the limitation of monitoring the resistance of the conductive bond during at least one of the compressing and heating steps and generating a feedback signal corresponding to the resistance, and reducing the pressure applied during the compressing step to a holding level when the feedback signal indicates that the electrical characteristic has reached a predetermined threshold.

3. As to claims 1, 3-8, does not disclose the improvement of a step of adjusting an amount of pressure applied during the compressing step in response to the feedback signal.

4. Furthermore, with respect to claims 17-21, while the prior art does disclose compressors as claimed and means for curing as claimed, and separate meters, the prior art of record does not disclose the improvement of a meter for measuring an electrical characteristic of the bond and generating a feedback signal corresponding to

Art Unit: 1734

the electrical characteristic, and having the compressor responsive to the feedback signal.

5. US patent 6,336,990 and US Patent 6,077,382 disclose that it is known to use a method for manufacturing a bonded substrate wherein the first and second conductive surfaces are bonded by use of an anisotropic material during the compressing or heating steps. The references provide support for controlling the temperature and pressure of the bonding operation by the apparatus. Furthermore, Tsukagochi (US 5,120,665) discloses a step of measuring the electric characteristics of the bond during pressing. Similarly, US Patent 6,323,661 to Wildes merely discloses using a meter to measuring the electrical characteristic. However, none of the references make disclosure of monitoring the electrical characteristic during bonding AND adjusting the pressing or compressing step as a result of the electrical characteristic.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and

Art Unit: 1734

giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III
March 20, 2004



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700